

BASF Aktiengesellschaft

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B02/0072US IB/HN/dol**We claim:**

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1. A process for preparing isophoronenitrile by adding HCN to isophorone, which comprises using, as a catalyst, CaO having a BET surface area of > 1.5 m<sup>2</sup>/g.
- 10 2. A process as claimed in claim 1, wherein the CaO used has a BET surface area of > 2 m<sup>2</sup>/g.
3. A process as claimed in claim 1, wherein the CaO has a purity of > 96%.
- 15 4. A process as claimed in claim 1, wherein the reaction is carried out at temperatures of from 100 to 200°C.
5. A process as claimed in claim 1, wherein the reaction is carried out at a pressure of ≥ 1 bar.
- 20 6. A process as claimed in claim 1, wherein the isophorone/HCN ratio is ≥ 1.
7. A process as claimed in claim 1, wherein isophorone and CaO are initially charged together and brought to the reaction temperature before the HCN is added.
- 25 8. A process as claimed in claim 1, wherein isophorone is initially charged alone and heated to the reaction temperature before CaO is added and then the HCN is added.
9. A process as claimed in claim 1, wherein a portion of the isophorone is initially charged and a mixture of isophorone and HCN is added.
- 30 10. A process as claimed in claim 1, wherein the concentration of the catalyst is from 2000 to 10000 ppm.